Breakout Session Summary
ERGONOMICS

EXO-G Meeting

June 29, 2017
1. Knowledge Sharing
   A. Improved communication from the end user to the technology developer
   B. Decision support – matching tasks to device specifications
   C. Device selection – worker choices

2. Risk/Hazard Communication
   A. By the developer
   B. To the user

3. Business Case
   A. Performance/productivity – Real time feedback
   B. Quality
   C. ROI
1. Knowledge Sharing

A. Improved communication from the end user to the technology developer
B. Decision support framework – tasks matched to device specifications
C. Device selection – worker choice

- Academia feels that many problems have been solved; not appearing in products.
- Best practices/success stories/”entry point” all needed.
- Need a path to sharing knowledge/challenges/resources/ideas/data in a technology agnostic way. (e.g. shared repository/library)
- Customization of the exoskeleton and its interaction with the work environment to the individual worker.
- Make devices in harmony with the user through designs with physiologic feedback in control loop.
2. Risk/Hazard Communication
   A. By the developer
     1. Must be “effective” - reduce musculoskeletal risks, reduce forces on the body, reduce onset of fatigue. Q: What metrics need to be collected?
     2. Safe to use and environmentally compliant - Snag hazards, wifi, confined spaces, power limitations, weight, center of gravity, metabolic load, skin/compression, chafing, hot spots
     3. Long term adverse/side effects on healthy users? e.g. Load transfer to other muscle groups, alter neuromuscular function
     4. Other “transference of risk” or new hazards/challenges

   B. To the user
     1. Educating/raising awareness about technologies to the workers in need
     2. Potential adverse effects of increased task exposure time or other tradeoffs.
3. Business Case
   A. Performance/productivity
   B. Quality
   C. ROI/Cost Benefit
      1. Management buy-in
      2. Data-driven